

The Red Sea Dollar

How a Trade Coin of More Than a Century's Standing Is Being Retired

By Frank Parker Stockbridge

RECENT reports from Arabia and the African coast of the Red Sea point to the success of the interesting effort of the Italian Government to substitute an Italian coin for the Austrian Maria Theresa dollar, which for more than a century has been the standard unit of value and medium of exchange in the entire Red Sea district.

An Italian decree of May 31, 1918, provided for the coining at the royal mint of a silver trade dollar to compete as "The Dollar of Italy." Primarily intended to be used in the Italian colony of Eritrea, the expectation is that it would eventually displace the Maria Theresa dollar throughout the Red Sea commercial district seems about to be fully realized. The first million of the new dollars were readily accepted by the natives of Eritrea on a parity with the Austrian coin with which they had been so long familiar, and they were found to pass readily across the borders of the colony on the same basis in dealing with the other countries and colonies adjacent.

The Red Sea commercial district includes Eritrea, Abyssinia, Somaliland (French, British and Italian), Makalla, the Aden Protectorate, and the Arabian provinces of Yemen, Asir and Hedjaz now erected by the terms of the Treaty of Versailles into the independent Kingdom of the Hedjaz. Throughout this district the Maria Theresa dollar has circulated for much more than a hundred years. The coin was first minted in 1780 at Trieste, and up to 1914 large numbers were minted annually, all, curiously, bearing the original date, 1780, there being no apparent necessity for changing the original dies. The best obtainable estimate at the beginning of the war were that more than 200,000,000 of these trade dollars were in circulation or hoarded in the Red Sea district.

The rise in the price of silver during the war resulted in the buying up of many of these dollars by traders,

for export as bullion, and Mr. Addison E. Southard, United States Consul at Aden, from whom many of the facts here set down were obtained, places the proportion of Maria Theresa dollars thus withdrawn from circulation at more than one-third of the total number.

With no new supplies available, and the natives uneducated in the values of any other form of coinage and totally ignorant of the use of paper money or of checks and drafts, there resulted a serious shortage in the medium of exchange for commercial purposes and traders found themselves, in the late years of the war and the period immediately following, reduced to actual barter in order to obtain the coffee, skins, hides and other products of the region. The actual cotton piece goods or other manufactured commodities had to be shown and exchanged on the spot, in many instances, to induce the natives to part with their wares.

The new Italian dollar was designed not only to supply this lack for the colony of Eritrea, but to extend Italian political and economic influence throughout the Red Sea district, and this result seems to be well under way toward accomplishment. The Maria Theresa dollar was coined in Trieste for private demands and a mint charge of 1½ per cent, collected. It was solely a trade dollar and was not issued for Government use. The new Italian trade dollar is coined in Rome for the Eritrean government but will also be coined upon private demand, as it is not intended to displace the Italian currency which is the legal circulating medium in Eritrea, but solely to be used as a trade dollar.

On the new coin the effigy of symbolic Italy, much resembling that of Maria Theresa on the old Austrian coin, is the principal device. The Maria Theresa dollar has a brooch of ten jewels on the shoulder of the robe; by examining these jewels to see whether or not they were worn smooth the native trader estimated the possible loss of weight in the coin in hand. This brooch

is omitted in the new Italian piece. The double-headed Austrian eagle on the reverse gives place to the single-headed Italian or Savoyard eagle, while the Cross of Savoy is embazoned on the shield carried on the eagle's breast, in the same fashion as the arms of Austria are carried on the Maria Theresa dollar.

At first there was some objection on the part of the Mohammedan natives to the presence of the cross on the new coin, and the keen-eyed Arabs were quick to note the absence of the shoulder brooch. The difference in the inscriptions is of no significance, as the natives cannot read them in any language. On the whole, the design has proved attractive.

The new dollar is almost identical in weight and size with the old one. The Austrian dollar weighs .432.02 grains and is of silver of a fineness of .8333; the Italian dollar weighs .433.12 grains and is .835 fine. Each has a diameter of 40 mm., or 1.57 inch.

Offered in the Eritrean market at the price of 9 Italian lire, the new dollar was rapidly absorbed, although a premium of half a lira was offered by some traders for use in Abyssinia. "The Abyssinian," writes Consul Southard, "is a particularly conservative individual and it will probably be some time before he will accept the new dollar as the equivalent of the Maria Theresa dollar, even though it weighs slightly more."

The establishment of the Italian trade dollar in Abyssinia will work decidedly in favor of the development of Italo-Abyssinian trade relations. The whole effort to substitute a new trade dollar for the old inaugurate an interesting contest between commercial progress and the intense conservatism of the Red Sea native producer. If the district can absorb, as is anticipated, some 2,000,000 of the new dollars annually, traders of all nations will find it much easier to do business than it has been since the coining of the Maria Theresa dollars ceased, nearly seven years ago.

Correspondence

The editors are not responsible for statements made in the correspondence column. Anonymous communications cannot be considered, but the names of correspondents will be withheld when so desired.

"The President's Great Opportunity"

To the Editor of the SCIENTIFIC AMERICAN:

I note on your editorial page of the SCIENTIFIC AMERICAN bearing date of July 16th, an article entitled "The President's Great Opportunity."

I wish to express my most hearty approval of the stand which you have taken on the question of disarmament and the futility of war.

I have read the SCIENTIFIC AMERICAN for many years, and it has devoted much space to the description of the United States naval vessels of various types. I never could interest myself in these great machines, because they were designed either for the purpose of actually destroying human life and human property, or as a menace to the other nations of the world.

For the last century we have prided ourselves on the beneficent contributions of science, discovery, and invention to the well-being of the human race. The modern practice among the great nations of the world of turning these great forces into destructive agencies of war involves a contradiction which is so senseless and so absurd that one wonders sometimes whether the savage instincts of primitive man.

Your attitude is so reasonable, and the stand you take on this question is so firm that I am sure it will result in great benefit. It is unusual for the editor of a scientific journal to take such a stand, but it is absolutely fitting that he should do so; first, because war as a measure of settling difficulties is not only unscientific, but preposterous; second, because it is a declaration from such a high source carries with it a convincing proof. Neither the results of the past war nor the prospects of future wars will bear a scientific analysis, and the stand you have taken is not only reasonable from the layman's point of view, but also scientifically sound.

Permit me, therefore, to commend most highly the position which you have taken in this matter.

Kokomo, Indiana. ELWOOD HAYNES.

Make Air-Stunting a Criminal Offense

To the Editor of the SCIENTIFIC AMERICAN:

As a former pilot in the Air Service, may I compliment you on your editorial, "Aviation Fatalities," in your July 23rd number. I agree most heartily in that there is no place for stunt flying in commercial aviation.

It seems to me that any pilot who engages in stunt flying or any other needlessly dangerous maneuvers except in connection with military aeronautics is guilty of sheer criminal negligence. It would be a great help to the cause of commercial aviation if legislation could be enacted to provide adequate punishment for such practices.

Very few pilots who have kept up their flying have died of old age. I believe such editorials as yours are helpful in forming a public opinion which will insist on pilots exhibiting at least enough self-control to refrain from practices which jeopardize not only human lives but the development of a vital industry.

Philadelphia, Pa. EDWARD M. POWELL.

The Bird-Cage Problem

To the Editor of the SCIENTIFIC AMERICAN:

The following is an attempt to answer A. B. C.'s question, which appeared in the correspondence column of the SCIENTIFIC AMERICAN for June 11, and reads as follows: "A bird sitting on a perch in a cage is weighed together with the cage. How does this total weight compare with the weight of the same cage but with the bird flying in it? Why?"

Such a question tends to test the reasoning power of a student of science, inasmuch as he is called upon to apply the scientific principles that he has so studiously acquired. A law of science is often called upon to solve many a unique problem, but quite often its application is only perceived after minute observation.

In this case, I believe that the problem can be most clearly stated in a concrete form, which for simplicity may be as follows: A cage is placed upon the pan of a spring scale or balance. The indicated weight of the cage complete with its perch, we will assume to be four pounds. If we then place a canary, weighing, say, three and one-half ounces, on the perch in the cage, the dial hand will show that the total weight is four pounds, three and one-half ounces. This is of course obvious, because the bird is suspended by the perch, which is in turn suspended by the cage. Now, then, let the bird take to flight, and immediately the dial

hand returns to four pounds, showing a loss which is exactly equivalent to the weight of the canary, i.e., three and a half ounces.

You ask why this is so?

What has become of the weight of the bird? It is against the laws of the conservation of matter and energy to suppose that the bird has lost his weight, and therefore weighs nothing. Yet the dial hand would have us believe so. The duty of upholding the canary has been transferred from the perch to the surrounding atmosphere, and this reaction of the atmosphere against the muscular force of the canary extends beyond the cage. But on the other hand if the air were a component part of the cage (such as would be ideally represented by one made of glass and air tight, of course having air confined in it for the bird's sake) then the dial hand would indicate the same weight whether the bird was flying or at rest on the perch. In flying in such a closed system, the reaction of the air to the muscular power of the bird does not extend beyond the cage.

Such a closed system forms a gravitational unit, and containing as it does a certain definite amount of matter subject to the action of the earth's gravity, no change of position of its integral parts can be expected to change this mass.

In summing up, the flying bird cannot be weighed directly unless the air in which it flies is confined within the boundaries of the cage. If on the other hand the air is not confined, the flying bird registers no weight.

I believe I have made myself clear in this explanation.

GEORGE H. LEDL.

Cleveland, Ohio.

Buoy or Buffer?

To the Editor of the SCIENTIFIC AMERICAN:

Re your last issue (July 3), "Is Sause for the Goose Also Sause for the Gander?" I note Mr. C. E. Randall's sarcastic letter which is worth printing since it is at the expense of some newspaper. But what of the SCIENTIFIC AMERICAN, which describes an old automobile tire applied to a mooring buoy in these words, "to keep it afloat, thereby replacing the cork filling?" etc.

The photograph shows a hollow sheet metal buoy in which air is employed "to keep it afloat," and the only office of the tire is evidently to prevent injury to the hull of the small boat (or flying boat) when "picking up" the buoy.

E. PAUL DU PONT, Montchanin, Del.